

The Invention Claimed Is:

1. In a conveyor wherein stacks of food product are transported on a conveying surface and must be temporarily stopped, a mechanism comprising:

5 a lower stop having a lower stack-engaging portion and a lift portion, said lift portion selectively actuatable to elevate said lower stack-engaging portion to engage a bottom surface of the stack and to lift said stack above said conveying surface; and an upper stop having an upper stack-engaging portion and a lowering portion, said lowering portion selectively actuatable to lower said upper stack-engaging portion to engage an upper surface of said stack.

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2. The mechanism according to claim 1, comprising a lost-motion connection between said lowering portion of said upper stack-engaging portion to accommodate stacks of varying heights.

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3. The mechanism according to claim 2, wherein said upper stack-engaging portion engages said stack by force of the weight of said upper-engaging portion.

4. The mechanism according to claim 1, wherein said lift portion and said lowering portion are configured to act simultaneously.

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5. The mechanism according to claim 1, wherein said lift portion and said lowering portion each comprise a pneumatic cylinder, said pneumatic cylinders being

dual acting to both lift and lower said upper stack-engaging portion and said lower stack-engaging portion to engage and then release said stack.

6. The mechanism according to claim 1, wherein said upper stack-engaging
5 portion comprises a disk having a flat bottom surface.

7. The mechanism according to claim 2, wherein said lowering portion
comprises a pneumatic cylinder having an extending rod, and said lost-motion
connection comprises an end cap fixed to said rod and a connection portion fixed to
10 said upper stack-engaging portion, said connection portion having a space allowing
limited free vertical movement of said end cap.

8. A conveyor system for laterally aligning stacks of food products,
comprising:
15 a conveying surface receiving a stream of stacks sequentially in laterally
spaced positions, said conveying surface conveying said stacks in longitudinal lanes;
two lower stops arranged laterally side-by-side beneath two adjacent
longitudinal lanes, and each having a lower stack-engaging portion a lift portion, said lift
portion selectively actuatable to elevate said lower stack-engaging portion to engage a
20 bottom surface of the stack and to lift said stack above said conveying surface; and
two upper stops arranged respectively above said two lower stops, and
each having an upper stack-engaging portion and a lowering portion, said lowering

portion selectively actuatable to lower said upper stack-engaging portion to engage an upper surface of said stack;

wherein when two side-by-side stacks are stopped by said two upper stops and said two lower stops, said two upper stops and said two lower stops are
5 activated to transfer said stacks together longitudinally along said conveying surface.

9. The conveyor system according to claim 8, comprising a lost-motion connection between said lowering portion of said upper stack-engaging portion to accommodate stacks of varying heights.

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10. The conveyor system according to claim 9, wherein said upper stack-engaging portion engages said stack by force of the weight of said upper-engaging portion.

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11. The conveyor system according to claim 8, wherein said lift portion and said lowering portion are configured to act simultaneously.

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12. The conveyor system according to claim 8, wherein said lift portion and said lowering portion each comprise a pneumatic cylinder, said pneumatic cylinders being dual acting to both lift and lower said upper stack-engaging portion and said lower stack-engaging portion to engage and then release said stack.

13. The conveyor system according to claim 8, wherein said upper stack-engaging portion comprises a disk having a flat bottom surface.

14. The conveyor system according to claim 9, wherein said lowering portion
5 comprises a pneumatic cylinder having an extending rod, and said lost-motion connection comprises an end cap fixed to said rod and a connection portion fixed to said upper stack-engaging portion, said connection portion having a space allowing limited free vertical movement of said end cap.